

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of Claims:

- 1           1. (Currently amended) A method for enabling a network of database  
2 systems to provably track a message, wherein the message is created at an origin  
3 system and is destined to a recipient system, wherein the message passes through  
4 a first database system and a second database system, and wherein the origin  
5 system, the recipient system, the first database system, and the second database  
6 system are different from one another to prove that an origin system sent a  
7 message, comprising:  
8           determining a first digest of the message at the first database system;  
9           receiving sending the message and a signed the first digest of the message  
10 from the first database system to at a the second database system from the origin  
11 system, wherein the signed first digest was created by signing a digest of the  
12 message using an origin private encryption key;  
13           signing the first digest at the second database system using an origin  
14 public second private encryption key that is associated with the second database  
15 system; origin private encryption key to verify that the signed first digest was  
16 signed by the origin system, thereby proving that the origin system created and  
17 sent the message; and  
18           sending the signed first digest from the second database system to the first  
19 database system;  
20           validating the signed first digest at the first database system using a second  
21 public encryption key that is associated with the second private encryption key;  
22 and

23        if the signed first digest is valid, persistently storing the signed first digest  
24        at the first database system, thereby enabling the first database system to prove  
25        that the second database system requested to receive the message.

26        ~~persistently storing the signed first digest with the message, which enables~~  
27        ~~the database system to present the signed first digest as proof that the origin~~  
28        ~~system sent the message, thereby preventing the sender from persuasively denying~~  
29        ~~that the sender sent the message.~~

1            2. (Canceled).

1            3. (Canceled).

1            4. (Canceled).

1            5. (Currently amended) The method of claim 1, wherein the ~~origin-second~~  
2        public encryption key and the ~~origin-second~~ private encryption key are a key pair  
3        of a public key encryption system.

1            6. (Canceled).

1            7. (Currently amended) The method of claim 1, wherein ~~computing~~  
2        determining the first digest includes involves using one of message digest 2  
3        (MD2), message digest 4 (MD4), message digest 5 (MD5), secure hash algorithm  
4        (SHA), and secure hash algorithm 1 (SHA1).

1            8. (Currently amended) A computer-readable storage medium storing  
2        instructions that when executed by a computer cause the computer to perform a  
3        method for enabling a network of database systems to ~~prove that an origin system~~

4 ~~sent a message~~provably track a message, wherein the message is created at an  
5 origin system and is destined to a recipient system, wherein the message passes  
6 through a first database system and a second database system, and wherein the  
7 origin system, the recipient system, the first database system, and the second  
8 database system are different from one another, the method comprising:  
9 determining a first digest of the message at the first database system;  
10 ~~receiving sending the message and a signed~~the first digest of the message  
11 ~~at a~~from the first database system to the second database system from the origin  
12 ~~system, wherein the signed first digest was created by signing a digest of the~~  
13 ~~message using an origin private encryption key;~~  
14 signing the first digest at the second database system using an origin  
15 ~~public~~second private encryption key that is associated with the second database  
16 system;~~origin private encryption key to verify that the signed first digest was~~  
17 ~~signed by the origin system, thereby proving that the origin system created and~~  
18 ~~sent the message; and~~  
19 sending the signed first digest from the second database system to the first  
20 database system;  
21 validating the signed first digest at the first database system using a second  
22 public encryption key that is associated with the second private encryption key;  
23 and  
24 if the signed first digest is valid, persistently storing the signed first digest  
25 at the first database system, thereby enabling the first database system to prove  
26 that the second database system requested to receive the message.  
27 ~~persistently storing the signed first digest with the message, which enables~~  
28 ~~the database system to present the signed first digest as proof that the origin~~  
29 ~~system sent the message, thereby preventing the sender from persuasively denying~~  
30 ~~that the sender sent the message.~~

1           9. (Canceled).

1           10. (Canceled).

1           11. (Canceled).

1           12. (Currently amended) The computer-readable storage medium of claim  
2 | 8, wherein the ~~origin-second~~ public encryption key and the ~~origin-second~~ private  
3 encryption key are a key pair of a public key encryption system.

1           13. (Canceled).

1           14. (Currently amended) The computer-readable storage medium of claim  
2 | 8, wherein ~~computing-determining~~ the first digest ~~includes-involves~~ using one of  
3 message digest 2 (MD2), message digest 4 (MD4), message digest 5 (MD5),  
4 secure hash algorithm (SHA), and secure hash algorithm 1 (SHA1).

1           15. (Currently amended) An apparatus for enabling a network of database  
2 systems to provably track a message, wherein the message is created at an origin  
3 system and is destined to a recipient system, wherein the message passes through  
4 a first database system and a second database system, and wherein the origin  
5 system, the recipient system, the first database system, and the second database  
6 system are different from one another ~~to prove that an origin system sent a~~  
7 ~~message~~, comprising:  
8           a determining mechanism that is configured to determine a first digest of  
9 the message at the first database system;  
10           a first ~~receiving-sending~~ mechanism that is configured to ~~receive-send~~ the  
11 ~~message and a signed first digest of the message at a~~ from the first database

12 ~~system to the second database system from the origin system, wherein the signed~~  
13 ~~first digest was created by signing a digest of the message using an origin private~~  
14 ~~encryption key;~~  
15 ~~a signing a first verifying mechanism that is configured to use an origin~~  
16 ~~public second private encryption key that is associated with the second database~~  
17 ~~system; origin private encryption key to verify that the signed first digest was~~  
18 ~~signed by the origin system, thereby proving that the origin system created and~~  
19 ~~sent the message; and~~  
20 ~~a second sending mechanism that is configured to send the signed first~~  
21 ~~digest from the second database system to the first database system;~~  
22 ~~a validating mechanism that is configured to validate the signed first digest~~  
23 ~~at the first database system using a second public encryption key that is associated~~  
24 ~~with the second private encryption key; and~~  
25 ~~a storing mechanism, wherein if the signed first digest is valid, the storing~~  
26 ~~mechanism is configured to persistently store the signed first digest at the first~~  
27 ~~database system, thereby enabling the first database system to prove that the~~  
28 ~~second database system requested to receive the message.~~  
29 ~~a first storing mechanism that is configured to persistently store the signed~~  
30 ~~first digest with the message, which enables the database system to present the~~  
31 ~~signed first digest as proof that the origin system sent the message, thereby~~  
32 ~~preventing the sender from persuasively denying that the sender sent the message.~~

1 16. (Canceled).

1 17. (Canceled).

1 18. (Canceled).

1           19. (Currently amended) The apparatus of claim 15, wherein the ~~origin~~  
2    second public encryption key and the ~~origin~~second private encryption key are a  
3    key pair of a public key encryption system.

1           20. (Canceled).

1           21. (Currently amended) The apparatus of claim 15, wherein ~~computing~~  
2    determining the first digest includes involves using one of message digest 2  
3    (MD2), message digest 4 (MD4), message digest 5 (MD5), secure hash algorithm  
4    (SHA), and secure hash algorithm 1 (SHA1).

1           22. (Canceled).

1           23. (Canceled).

1           24. (Canceled).